Electronics and Communication Engineering

Welcome to the homepage of Electronics & Communication Engineering Department. The present time is the time of Electronics and Communication engineering. We cannot imagine the today life without electronics. Over a last few decades Electronics Engineering is one of the largest and fastest growing industries. It covers a wide range of applications, from radio to mobile phones, from bikes to airplanes, missiles, fighter planes and ships.

The Department at present offer B.Tech and M.Tech in Electronics & Communication. The Department has highly qualified and competent faculty members. The primary objective of the department has been to impart quality education. In order to ensure high standards of education for its students, the department has well-equipped and fully furnished laboratories to supplement the theory courses like the Basic Electronics Lab, the Microprocessor Lab, Microwave Engineering Lab and Digital Signal Processing Lab. The degree course is of four years that is 8 semesters and the curriculum is as per the M.D. University Rohtak. The department aims to develop specialized knowledge in Electronics and Communication Engineering with much emphasis on practical's to develop the student's skills in Electronics design manufacturing applications and repairs. The department is concerned about the professional needs of the students and arranges various in-house events such as technical events, seminars, PDP classes, workshops, conferences etc. Over the last few years, the department has seen good placements.

Intake: 60

Duration: 4 yrs

Eligibility Criteria for M.Tech ECE

Eligibility:

First preference in the order: B.E./B.Tech. or equivalent degree in Electronics & Communication Engineering/ Electronics & Telecom Engineering /Electronics Engineering with 50% (45% marks for SC/ST candidates of Haryana only) marks in aggregate alongwith valid GATE score.
Second preference in the order: (a) B.E./B.Tech. or equivalent degree in Electrical & Electronics Engineering/ Applied Electronics & Instrumentation Engineering/ Electronics Instrumentation & Control Engineering/ Electrical Engineering/ Instrumentation & Control Engineering/
Instrumentation Engineering /Control Engineering with 50% marks in aggregate;
Biomedical Engineering /Mechatronics with 50% marks in aggregate alongwith valid GATE score.
Third preference in the order: (a) M.Sc. (Electronics) with 50% marks in aggregate; (b) M.Sc (Physics with specialization in Electronics) with 50% marks in aggregate with valid GATE

score in Electronics & Comm. Engineering / Electrical & Electronics Engineering.

Electronics and Communication Engg Labs

Basic Electronics Lab: In order to understand the basic principles of electronics, this lab. provides knowledge about different components, circuits and measuring instruments used in electronics. Here, students get knowledge about active and passive components and study about rectifiers, amplifiers, oscillators, etc. This lab. also provides the facility to become familiar with the principle of operations and usefulness of some of the essential electronic measuring instruments such as digital multimeters, regulated power supplies, function generators, oscilloscopes etc.

Electrical Workshop Lab:

This lab is responsible for the electrical work, in which the students learn about the electrical connection of various types of electrical equipments, like motors, transformers, house wiring, electrical panel controlling etc.

Digital Electronics Lab:

In this lab. students gain experience in the design, assembly, testing, and trouble-shooting of digital electronic circuits. Experiments encompass a wide range of topics such as combinational circuits,

sequential circuits, clock circuitsand programmable logic devices. This lab. provides proper and sufficient equipment, devices and ICs to the students to carry out the experimental work.

Microwave Engineering Lab:

This is a specialized lab. dealing with the study of different microwave components. It contains a number of setups comprising of Klystron Tubes, Gunn Diodes, Klystron Power Supplies, Modulators, Directional Couplers, Magic Tee, Isolators, Circulators, Microwave Test Benches, Power Meters, Energy Meters and VSWR Meters etc.

Electronics Workshop and Printed Circuit Board (PCB) Lab:

Electronic Workshop is primarily responsible for all electronics related design, development, repair and maintenance of facilities and experimental set-ups. It is also responsible for general fault diagnosis and repair, electrical safety testing and computer interfacing. The lab. has a Printed Circuit Board (PCB) fabrication facility including Computer Aided Design for prototyping work and small production runs using the software Dip trace. The necessary machines that are essential for PCB fabrication such as drilling machine, shearing machine, etching machine, protocure machine, UV exposure machine are available here along with dark room facility. This lab. is extensively used by the final year students for their project work.

Analog Integrated Circuits Lab:

This is a basic lab dealing with the design of common analog circuits with discrete components utilizing OPAMPs, 555 timers, etc. The lab provides the practical knowledge about important aspects of Analog integrated Circuits.

Microprocessor Lab:

This lab. provides intensive practical revelation to the students in the field of microprocessor architecture and industrial control through microprocessors. It has a large number of 8085 & 8086 microprocessor kits, peripheral kits, CROs, multimeters etc. to facilitate the experimentation as per curriculum as well as for aiding the project work. A different exercise in this lab. includes serial data communication between PC and 8085 microprocessor trainer kit, peripheral kits, HDL kits, 0809 kits, and assemblers. The students are also given a provision to update themselves with 8088 microprocessor with various add-on facilities.

Communication Lab:

All analog and digital communication related experiments are carried out in this lab. Any standard set up in the lab. Consists of equipments like function generators, oscilloscopes, power supplies, communication trainer kits, noise generators, spectrum analyzers etc. The students are familiarized with different modulation techniques such as FM, AM, SSB-SC, DSB-SC, etc. The lab. has also a number of kits demonstrating different techniques such as FSK, PCM, PAM, TDM, Delta Modulation, PPM, PWM etc. It is fully equipped to perform experiments on various Modulator/Demodulator

Characteristics, Measurement of Characteristic Impedance, Load Impedance of Co-axial Transmission Lines etc.

Digital Signal Processing Lab:

This is a specialized laboratory with emphasis on signal processing experiments. Here students carry out signal processing tasks in both hardware and software. While Matlab is used for simulation task, real-time experiments are carried out using DSP kits. Beside these, arbitrary waveform generators, Oscilloscopes, scanner and color printers are also available in the lab.The lab is fully equipped to perform experiments such as Sampling & wave generation, FIR/IIR filter implementation, DFT computation with using DSP Processors.

Project Lab:

This is the lab where students of final year work on their mini projects and final projects. It is equipped with sufficient number of test and measuring equipments like CROs, function generators, variable power supplies, etc.